DETAILED ACTION

1. This communication is in response to applicant's amendment filed under CFR 1.111 on 6/16/2009 to non-final office action. Claims 1-22 remain pending.

Response to Arguments

2. Applicant's arguments filed 6/16/2009 have been fully considered but they are not persuasive.

3. First, Applicant argues that there is no suggestion, motivation or reason why one of ordinary skill in the art would combine the configurable switches of Bella with the teachings of Rubin.

4. Rubin teaches a system for testing a loop in a telephone network. The basic functionality the system is to gain access to a loop to be tested, connecting to it and directing appropriate testing activities. Rubin at col 2/ln 59 through col 3/ln 6. The system includes network connection devices for connecting an apparatus to a network and outputting serial electric signals, and solid state switches for receiving and outputting corresponding electric signals. See e.g., Rubin at col 14/ln 5-12, col 48/ln 20. Although the system is applied to analog telephony, Applicant's claim are broad enough to encompass any type of network. Bella teaches a system for testing a transmission line and a customer-end equipment in an ASDL network. Bella's system includes a testing switch which changes a connection from end-station to in-line in order to test the transmission line as well as the customer equipment.

5. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one of ordinary skill in the art would be motivated to apply the teachings of Bella regarding end-station and in-line switching to the testing of loops in order to be able to test both the end stations and the transmission paths between them separately. In view of Applicant's broad claim language, the Examiner finds this motivation to be part of the knowledge generally available in the art of testing networks.

6. Second, Applicant argues that Rubin-Bella fails to expressly disclose "the apparatus can be connected to or formed as part of the 'front-end' of a network tester or analyzer." Response at pg 10, par 2. In response to applicant's argument, it is noted that the features upon which applicant relies (i.e., apparatus connected to front-end of tester) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. Third, Applicant argues that Rubin-Bella fails to expressly disclose the limitations of claims 7, 12 and 18, generally described as "two port bypass circuits, each one having at least three output ports, being arranged to receive signals, output a corresponding signal on a first of its output ports, wherein each is controllable such that signals can be selectively output on a second of the ports and received at the other bypass circuit via a third port." It is evident from the detailed mappings found in the below rejection(s) that Bella teaches this functionality. Bella teaches two circuits with three output ports each, configured to selectively output signals on to an end station 24 or to a test circuit 18b. See Bella col 3/ln 38-56, Figs 3 and 4. In addition, it is clear from the numerous teachings (previously and currently cited) that the provision for bypass circuits was widely implemented in the networking art. Thus, Applicant's arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive.

8. For the above stated reasons, the rejection is maintained.

Drawings

9. The replacement drawings were received on 6/16/2009. These drawings are accepted by the Examiner.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-5, 7-16, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin (US 4,459,436) in view of Bella (US 6,181,775).

12. Regarding claim 1, Rubin teaches a connection apparatus for a network tester or analyser, the connection apparatus comprising:

at least two network connection devices for connecting the apparatus to a network, each connection device being constructed and arranged to output serial electrical signals corresponding to signals received from a network to which the connection apparatus is in use connected (serial-out processing circuits) (Rubin col 14/ln 5-12; Fig 3); and,

at least two solid state switches, each solid state switch being constructed and arranged to receive serial electrical signals output by a respective one of the network connection devices and to output a corresponding serial electrical signal (7-1 MUX) (Rubin col 48/ln 20-45, Fig 23);

However, Rubin does not explicitly teach each switch being controllable such that signals can be selectively output and received at another switch for return to said network.

However, in the same field of invention, Bella teaches each solid state switch is controllable such that electrical signals corresponding to signals received from a said network can selectively be output by the solid state switch and received at the other or another of the solid state switches for return to a said network by said other or another of the solid state switches (Bella, col 3/ln 38-56, Fig 4).

At the time the invention was made, given the teachings for two network devices and solid state switches to output serial electrical signals corresponding to signals received, the teachings of Bella for the switches being controllable to selectively output for return to said network would have been obvious. One of ordinary skill in the art would be motivated to combine these teachings in order provide for a single apparatus that can be used to test both a line and an equipment through remote control input.

13. Regarding claim 2, Rubin-Bella teaches a respective serial-to-parallel data converter for each solid state switch, each serial-to-parallel data converter being constructed and arranged to receive a serial electrical signal corresponding to signals received from a said network that is output by the respective solid state switch and to convert the received serial electrical signal into parallel form (Rubin col 14/ln 5-12; Fig 3).

14. Regarding claim 3, Rubin-Bella teaches each solid state switch is constructed and arranged to retime electrical signals received from the other or another of the solid state switches prior to returning said electrical signals to a said network (Rubin col 76/ln 3-13).

15. Regarding claim 4, Rubin-Bella teaches at least one of the solid state switches is a port bypass circuit (Bella col 14/ln 4-7).

16. Regarding claim 5, Rubin-Bella teaches each solid state switch is a port bypass circuit (Bella col 14/ln 4-7).

17. Claims 7-9 are substantially the same as claims 1-3 and are thus rejected for reasons similar to those in rejecting claims 1-3.

18. Regarding claims 10 and 11, Rubin-Bella teaches a network tester can selectively be operated in in-line (Fig 3) or end station (Fig 4) mode when connected to a network (Bella Fig 3 and Fig 4).

19. Claims 12-16 are substantially the same as claims 1-5 and 10 and are thus rejected for reasons similar to those in rejecting claims 1-5 and 10.

20. Claims 18-22 are substantially the same as claims 1-5 and 10 and are thus rejected for reasons similar to those in rejecting claims 1-5 and 10.

21. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin-Bella and in view of Acton et al. (5,544,319) (hereinafter Acton).

22. Regarding claims 6 and 17, Rubin-Bella does not explicitly teach receiving optical signals and converting them into serial electrical signals.

However, in the same field of invention, Acton teaches each network connection device is constructed and arranged to receive optical signals from an optical network and to convert the received optical signals into serial electrical form for output to the respective solid state switch (Acton col 20/ln 21-22).

At the time the invention was made, given the teachings for two network devices and solid state switches to output serial electrical signals corresponding to signals received, the swiches controllable to selectively output for return to said network, the teachings of Acton for using optical signals would have been obvious. One of ordinary skill in the art would be motivated to apply these teachings to optical signals in order to improve testing in fiber optic networks.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARLOS R. PEREZ TORO whose telephone number is (571) 270-5649. The examiner can normally be reached on Monday-Friday 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. R. P./
Examiner, Art Unit 2444
/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444